

WHAT IS CLAIMED IS:

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1. A profile producing method of producing a profile defining an association between a first color data representative of coordinates on a predetermined first color space and a second color data representative of coordinates on a second color space independent of output devices, for colors appearing on a color image outputted from an output device for outputting the color image in accordance with image data including the first color data, said profile producing method comprising:

a color association definition obtaining step of obtaining a color association definition, in which distribution of coordinate points is relatively rough, defining an association between the first color data representative of coordinates on the first color space and the second color data representative of coordinates on the second color space;

a profile selection step of selecting a first profile from among a plurality of profiles, in which distribution of coordinate points is relatively close as compared with the color association definition obtained in said color association definition obtaining step, defining an association between the first color data representative of coordinates on the first color space and the second color data representative of coordinates on the second color space; and

a profile producing step of producing a second profile defining an association between the first color data representative of coordinates on the first color space and the second color data representative of coordinates on the second color space, by correcting the first profile selected in said profile selection step in accordance with the color association definition obtained in said color association definition obtaining step.

2. A profile producing method according to claim 1, wherein said color association definition obtaining step causes said output device to output a color chart composed of a plurality of color patches associated with coordinate points more roughly distributed as compared with a distribution of the coordinate points defined in association by said first profile, on the first color space, and measures the plurality of color patches constituting the color chart outputted from said output device to determine each of the second color data representative of each of the coordinates on the second color space, on each color patch, so that a color association definition, defining an association between the first color data representative of the coordinates on the first color space, wherein a distribution of coordinate points is more rough as compared with the first profile, and the second color data representative of coordinates on the second color space, is determined.

of the plurality of profiles a first evaluation value for evaluating a difference between a dot gain quantity of the color association definition obtained in said color association definition obtaining step and a dot gain quantity of one of the plurality of profiles, and further, said profile selection step determines on each of the plurality of profiles a second evaluation value for evaluating a distance between coordinate points on the second color space, which are associated with identical coordinates on the first color space in accordance with the color association definition obtained in said color association definition obtaining step and one of the plurality of profiles, and selects one of the plurality of profiles, which is smaller in an evaluated difference and an evaluated distance, as the first profile in accordance with both the first evaluation value and the second evaluation value.

6. A profile producing method of producing a profile defining an association between a first color data representative of coordinates on a predetermined first color space and a second color data representative of coordinates on a second color space independent of output devices, for colors appearing on a color image outputted from an output device for outputting the color image in accordance with image data including the first color data, said profile producing method comprising:

color data extracted from the color association definition,
which corresponds to an identical first color data, and the
second color data extracted from the first profile, so that
an arithmetic operation for determining a curve formed
5 through coupling relatively small number of points to one
another is executed.

8. A profile producing method according to claim
7, wherein said curve arithmetic operating step performs on
10 said each combination a linear interpolation for the ratios
associated with a plurality of first color data to
determine each ratio associated with each value of the
first color data, so that an arithmetic operation for
moving points constituting a curve consisting of relatively
15 large number of points extracted from the first profile is
executed in accordance with the ratio.

9. A profile producing method according to claim
6, wherein said profile obtaining step determines the first
20 profile by correcting an existing third profile defining an
association between the first color data representative of
coordinates on the first color space and the second color
data representative of coordinates on the second color
space in such a manner that a dot gain on each color axis
25 of the first color space is coincident with a dot gain on
each color axis determined in accordance with the color
chart outputted from said output device.

a color association definition obtaining section for obtaining a color association definition, in which distribution of coordinate points is relatively rough, defining an association between the first color data representative of coordinates on the first color space and the second color data representative of coordinates on the second color space;

a profile selection section for selecting a first profile from among a plurality of profiles, in which distribution of coordinate points is relatively close as compared with the color association definition obtained in said color association definition obtaining section, defining an association between the first color data representative of coordinates on the first color space and the second color data representative of coordinates on the second color space; and

a profile producing section for producing a second profile defining an association between the first color data representative of coordinates on the first color space and the second color data representative of coordinates on the second color space, by correcting the first profile selected in said profile selection in accordance with the color association definition obtained in said color association definition obtaining section.

12. A profile producing apparatus according to claim 11, wherein said profile selection section determines

on each of the plurality of profiles a first evaluation value for evaluating a difference between a dot gain quantity of the color association definition obtained in said color association definition obtaining section and a dot gain quantity of one of the plurality of profiles, and selects one of the plurality of profiles, which is smaller in an evaluated difference, as the first profile in accordance with the first evaluation value.

13. A profile producing apparatus according to claim 11, wherein said profile selection section determines on each of the plurality of profiles a second evaluation value for evaluating a distance between coordinate points on the second color space, which are associated with identical coordinates on the first color space in accordance with the color association definition obtained in said color association definition obtaining section and one of the plurality of profiles, and selects one of the plurality of profiles, which is smaller in an evaluated distance, as the first profile in accordance with the second evaluation value.

14. A profile producing apparatus according to claim 11, wherein said profile selection section determines on each of the plurality of profiles a first evaluation value for evaluating a difference between a dot gain quantity of the color association definition obtained in

